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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,565	07/02/2001	Daniel Coffman	YOR9-1999-01	1503

7590 06/29/2004

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,565

Applicant(s)

COFFMAN ET AL.

Examiner

Lewis A. Bullock, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-124 is/are pending in the application.
- 4a) Of the above claim(s) 60-96, 123 and 124 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 25-59 and 97-122 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/30/01; 7/30/02.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 25-59 and 97-122 are, drawn to a conversational computing system through a conversational API, classified in class 719, subclass 328.
- II. Claims 60-96, 123, and 124 are, drawn to user processing with an application, classified in class 704, subclass 270.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I has separate utility such as communication with a conversational kernel through a conversational API in order to process queries. See MPEP § 806.05(d).
3. Inventions Group I and Group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process / method does not require one to communication to a kernel through an API as is taught in the Apparatus.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, different

search, and recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Frank Derosa on June 25, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 25-59 and 97-122. Affirmation of this election must be made by applicant in replying to this Office action. Claims 60-96, 123, and 124 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

7. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Applicant is requested to provide a copy of the reference disclosed on page 14, lines 2-3 of the specification.

Claim Rejections - 35 USC § 112

8. Claim 103 recites the limitation "the conversational virtual machine of claim 77" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 25-36, 40-59 and 97-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over HOLM (U.S. PATENT 5,850,629).

As to claim 25, HOLM teaches a conversational computing system, comprising: a multi-modal CUI manager (text-to-speech conversion application), operatively connected to a plurality of I/O renderers (engines / controller / DLLs), for receiving input queries and input events (selection of text) and generating output messages and output events (speech) in connection with an active application (via user selecting play button) (col. 3, lines 23-35); a conversational kernel (windows kernel) for generating multi-modal dialogs (speech) in response to the input queries and input events, and for managing context associated with the active application (make sure TTS conversion application has the input keyboard focus) (col. 3, lines 40-53); and a conversational API (speech API) (col. 8, lines 40-66; col. 9, lines 26-35). It would be obvious that since the

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application communications with the kernel in order to transform text into speech that the application uses the kernel DLL or the controller which complies to a speech API for the communication.

As to claim 26, 40, and 41, HOLM teaches a conversational engine API (controller); and a plurality of conversational engines (engine / DLLs), wherein the conversational kernel (windows kernel) controls and accesses the conversational engines (engine / DLLs) through the conversational API (controller), to process the input queries and input events (text data) and to generate the multi-modal dialog and output events (speech) (col. 8, lines 40-67; col. 9, lines 3-7; col. 9, lines 11-35).

As to claims 27 and 28, HOLM teaches the kernel (Windows kernel) provides conversational services and behaviors (kernel DLL / engine functions) that are accessible by an application (target application) through the API (controller) wherein the services are formatting (change text to speech) (col. 8, lines 40-67; col. 9, lines 3-7; col. 9, lines 11-35).

As to claims 29-33, HOLM teaches the API comprises a library of functions (col. 8, lines 40-67; col. 9, lines 3-7; col. 9, lines 11-35). However, HOLM does not teach that the functions are implemented in a declarative language. Official Notice is taken in that it is well known in the art that speech functions are implemented in a declarative

language, i.e. XML. Therefore, it would be obvious to the teachings of HOLM that that the functions are XML functions.

As to claims 34-36, HOLM teaches the system executes on any suitable operating system environment (col. 3, lines 1-23). Official Notice is taken in that computer systems having operating systems wherein a virtual machine executes on top of the operating system are well known in the art and therefore would be obvious with the teachings of HOLM in order to convert text to speech on an operating system environment having a virtual machine.

As to claims 42-52, HOLM teaches a kernel for conversational processing (col. 8, lines 12-26; col. 8, line 53 – col. 9, line 36) and the system executes on any suitable operating system environment (col. 3, lines 1-23). However, HOLM does not teach the kernel comprising a task manager, a resource manager, an I/O manager and a context stack. Official Notice is taken in that it is well known in the art that a kernel has a task manager, a resource manager, an I/O manager, and a context stack and therefore would be obvious with the teachings of HOLM in order to manage task, resources, and I/O related to conversations, i.e. speech or voice commands.

As to claims 53-59, HOLM teaches exchanging information (output) with a conversational aware system (speaker system) wherein the aware system is a remote

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device (speaker system) (col. 9, lines 60-67). However, HOLM does not teach that the communication is through a communication stack. Official Notice is taken in that it is well known in the art that communication from one device to another is through a communication stack.

As to claim 97-99, HOLM teaches a conversational system, comprising: a kernel (windows kernel) adapted to manage dialog and context, conversational engines (engines / DLLs) and resources (engine output driver) and communication across devices (conversational system / amplifier / speaker system) having different user interface modalities (col. 9, lines 60-67; col. 3, lines 23-35; col. 3, lines 40-53); and an API (speech API) (col. 8, lines 40-66; col. 9, lines 26-35). It would be obvious that since the application communicates with the kernel in order to transform text into speech that the application uses the kernel DLL or the controller which complies to a speech API for the communication. HOLM also teaches the system executes on any suitable operating system environment (col. 3, lines 1-23). Official Notice is taken in that computer systems having operating systems wherein a virtual machine executes on top of the operating system are well known in the art and therefore would be obvious with the teachings of HOLM in order to convert text to speech on an operating system environment having a virtual machine.

As to claim 100, HOLM teaches an engine API (controller) comprising abstractions adapted to access a conversational engine (engine / DLLs) (col. 8, lines 40-67; col. 9, lines 3-7; col. 9, lines 11-35).

As to claims 101-103, HOLM teaches the API comprises a library of functions (col. 8, lines 40-67; col. 9, lines 3-7; col. 9, lines 11-35). However, HOLM does not teach that the functions are implemented in a declarative language. Official Notice is taken in that it is well known in the art that speech functions are implemented in a declarative language, i.e. XML. Therefore, it would be obvious to the teachings of HOLM that that the functions are XML functions.

As to claims 104-107, HOLM teaches a kernel for conversational processing (col. 8, lines 12-26; col. 8, line 53 – col. 9, line 36) and the system executes on any suitable operating system environment (col. 3, lines 1-23). However, HOLM does not teach the kernel comprising a task manager, a resource manager, an I/O manager and a context stack. Official Notice is taken in that it is well known in the art that a kernel has a task manager, a resource manager, an I/O manager, and a context stack and therefore would be obvious with the teachings of HOLM in order to manage task, resources, and I/O related to conversations, i.e. speech or voice commands.

As to claims 108-115, HOLM teaches the API comprises conversational protocols adapted to provide distribution of functions (output) and components of the

conversational system across multiple devices (amplifier / speaker system) (col. 9, lines 60-67).

As to claims 116-122, HOLM teaches that the system is a speech-enabled device (translates text to speech) (col. 8, lines 40-66; col. 9, lines 26-35). However, HOLM does not teach that the system is implemented in a programming language. Official Notice is taken in that it is well known in the art that a virtual machine is implemented in a programming language.

11. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over HOLM (U.S. Patent 5,850,629) in view of "The Performance of the Container Shipping I/O System" by ANDERSON.


As to claims 37-39, HOLM teaches the system executes on any suitable operating system environment (col. 3, lines 1-23). However, HOLM does not teach an I/O API. ANDERSON teaches an operating system having an I/O API for interfacing the plurality of I/O resources (pg. 229, 2nd and 4th paragraph). Therefore, it would be obvious to one skilled in the art at the time of the invention to combine the teachings of HOLM with the teachings of ANDERSON in order to facilitate copy-free I/O in a uniform, device-independent way (pg. 220, 1st paragraph).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



June 28, 2004